QC

Quality Control

A15 58

Memo

## \*101656\*

Page 1

May-13-13 1:10:57 PM D3903-1 Accept Item ID: Setup Start **Revision ID:** Stop Spacer Item Name: **Start Qty: 100.00 Start Date:** 5/08/13 **Cust Item ID:** Required Date: 5/17/13 Req'd Qty: 100.00 **Customer:** Reference: Run Process Plan: MLJ Date: 13-05-15 Tooling: Approvals: Date: Stop Date: QC: SPC (Y/N): Date: Tool # Plan Reject Reject Sequence ID/ Insp. Operation Set Up/ Tool ID Accept Qty Qty **Work Center ID** Description **Run Hours** Code Number Stamp Draw Nbr **Revision Nbr** D3903 В 100 0.00 B.C. 1 \*100\* 0.00 Hardinge Memo Hardinge CNC Lathe Small 1-TURN AS PER FOLIO FA813 & DWG D3903, DWG REV: 🏂 2-DEBURR AS REQUIRED QC2-Inspect parts off machine FAI/FAIB 110 0.00 13.6.1 \*110\*

0.00

									y con	يَّ DQA:	Date:	
NCR: Y	es / N	 O	•*		WORK ORDER NON-	COI	NFOR	MANCE / UPDATE			<del></del>	
										QA Closed:	Date:	
	ri y	•			DISPOSITION			AGAIN	IST DE	PARTMENT	PROCESS	
Part N	o				Rework Scrap Use-as-is		1	Skid-tube Crosstu  Machining Small F  noforming Finish	Fab		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	0				Work Order Update	]		Large Fab Compos	site	]	Supplier	
Root	Ì		ŀ	Descr	iption of work order update	l	Initial	Action		Sign &		
Cause	Dat	e Ste	Qty	<u> </u>	or Non-conformance	Ct	nief Eng	Description		Date	Verification	QC Inspector
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etup							ļ					
Other				1			İ					
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	Bendi	ng Not Con	ت همچنو الالارد الدواد	·	Bend	L	Grain			Ovalized		Pressure/Forced
		Not Con	entric to	O/S	BOM/Route	<u> </u>	Hardwa	- ·	<u> </u>	Over/Under	<b>—</b>	Temperature/Cure
- 1	Crack	***			Broken/Damaged	$\vdash$	-	on Incomplete	ļ	Part Incorrec	<del></del>	Weld
1	_	ed/Crimpe	d		Burrs	lacksquare	-1	ions Incomplete/Unclear		Part Lost/Mi	ssing	Wrong Stock Pulled
1	Cuffs			_	Contamination	<u> </u>	Mainte			Part Moved		
13.2	Heat 1			_	Countersink	$\perp$	Mislabe		<u> </u>	Positioned W		- -
Ļ	_	tion Strip	in Tube		Cut Too Short	L	Misread	1		Power Loss/S	Surge	Other
Ļ		s in Bend		<u>_</u>	Drill Holes		Offset				***	
Į.		e Waves i		on'	Drawing		4	Calibration			·	
]		ng Sequen			Finish	$\perp$	- i	equence				
	Wave	/Twist in 1	ube	1	Folio	1	Outside	Dimensions				

May-13-13 1:10:57 PM

Item ID:

D3903-1

Accept

\*N900040100\*

Setup Start

**Revision ID:** 

Start Date:

Item Name: Spacer

5/08/13

**Start Qty:** 100.00

\*100\*

**Cust Item ID:** 

Required Date: 5/17/13

Req'd Qty: 100.00

**Customer:** 

Reference:

**Approvals:** 

QC:

Process Plan:

Date:

Date:

**Tooling:** 

Date:

Date:

Stop

Sequence ID/ **Work Center ID**  Operation **Description**  Set Up/ **Run Hours** 

SPC (Y/N):

Tool ID

Tool # Plan Accept Qty Code

Reject Qty

Run

Reject Insp. Number Stamp

120

\*120\* OC

QC8- Inspect parts - second check

0.00

0.00

13/06/01

Quality Control

125

\*125\* Skidtubes

Skidtubes.

0.00

Memo

Memo

0.00

Clean spacers with Ultra Aluminum Cleaner

100 & BE13/06/03

130

Identify as per dwg & Stock Location:

0.00

\*120\*

Packaging

Memo

0.00

100 & BEB/06/03

Packaging

NCR: Yes	/ No				WORK ORDER NON-C	ONFORM	MANCE / LIP	DATE	DQA:	Date: _	t 3
NCN. 163	7 110				WORK ORDER HOR C		VIAITOE / OI		QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No.					Rework Scrap Use-as-is	1	Skid-tube Machining	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR No.		·		· · · · · · · · · · · · · · · · · · ·	Work Order Update		Large Fab	Composite	Nec/3tol	Supplier	Other
Root		, ,		Descri	ption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	(	or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector
Doc/Data											
quip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training		l									

Landii	ng Gea	ar	General	_		_	-
	Be	ending	Bend	Grain	Ovalized		Pressure/Forced
	Ce	entre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance		Temperature/Cure
	Cra	acks	Broken/Damaged	Inspection Incomplete	Part Incorrect		Weld
	Cri	rushed/Crimped	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing		Wrong Stock Pulled
	Cu	ıffs	Contamination	Maintenance	Part Moved		
	He	eat Treat	Countersink	Mislabeled	Positioned Wrong	_	_
·	ins	spection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge		Other
	Rip	pples in Bend	Drill Holes	Offset			
	То	orque Waves in Extrusion	Drawing	Out of Calibration			
	Tu	urning Sequence	Finish	Out of Sequence			
	$\square_{w}$	/ave/Twist in Tube	Folio	Outside Dimensions		· ·	

**FAULT CATEGORY** 

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Unapproved

<b>Work Orde</b> <i>May-13-13 1:10</i>		101656		*101	1656*			·			Page 3
Revision ID: Item Name:	D3903-1 Spacer			Accept	*N900	<b>040</b>	100	)* s	etup Sta		IS1* IS2*
	5/08/13	<b>Start Qty:</b> 100.00	*10	• •	Cust Item I	D:					
Required Date:	5/17/13	<b>Req'd Qty:</b> 100.00	*10	n^*	Customer:						
Reference:				•					~		
Approvals:	Process	Plan:	Date:	Tooling:	D:	ate:		R	tun Sta	!/	JR1*
	QC:		Date:	SPC (Y/N):	D:	ate:			Sto	» <b>*/</b>	IR2*
Sequence ID/ Work Center II	)	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. r Stamp
140		QC21- Final Inspection - \	Work Order Release	0.00					10	/ /	$\sim 10^{\circ}$
*140* QC Quality Control		Мето		0.00					13	16/4	

W (3-06-3

											DQA:	Date	
NCR:	Yes	/ No				WORK ORDER NON-C	COI	NFORM	MANCE / UPDATE				
											QA Closed:	Date	
Work Orde	oř.					DISPOSITION			AGAIN	ST DE	PARTMENT	PROCESS	
WOIK OIG	٠٠.			,	<u>.                                      </u>	Rework	1		Skid-tube Crosstul	he	1	Water Jet	Engineering
Part N	No.					Scrap	1		Machining Small F		Pro	d. Eng. Coor.	Quality
	•	-				Use-as-is	1	Thern	noforming Finishi	ng	Rec/Stor	e/Packaging	Other
NCR N	No. ِ					Work Order Update	]		Large Fab Composi	te		Supplier	
					<del></del>		T .				l c: 0		<u></u>
Root	١		_		1	ption of work order update	1	Initial	Action		Sign &		
Cause	,	Date	Step	Qty		or Non-conformance	Cr	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data	Ш												
Equip/Tooling	Ц				ļ								
Operator	Ш						1		,				
Material	Ш												
Setup	Ш		-	1									
Other	Ш		ļ										
Process	Ш			ļ			1						·
Supplier													
Training													,
Unapproved			·				<u>L</u>				<u> </u>		<u> </u>
						F	AUI	LT CATE	GORY				
Landi	ng G	Sear				General	_	_		_	_		<del>-</del> 1
		Bending				Bend	L	Grain		L	Ovalized		Pressure/Forced
		Centre No	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re	L	Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	ion Incomplete		Part Incorrec	it	Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/Unclear		Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	enance		Part Moved		-
		Heat Trea	it			Countersink		Mislabe	eled		Positioned W	/rong	

Misread

Offset

Out of Calibration
Out of Sequence

Outside Dimensions

Cut Too Short

Drill Holes

Drawing

Finish Folio Other

Power Loss/Surge

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

## **Picklist Print**

May-13-13 1:10:57 PM

Work Order ID:

101656

Parent Item:

D3903-1

Parent Item Name:

Spacer

**Start Date:** 5/08/13

Required Date: 5/17/13

**Start Qty:** 100.00

Required Qty: 100.00

IPP RevA: New issue DD verified by:EC

Comments:	IPP Reva: New iss	ue DD vermea by	/:EC										
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6T0.375W.058 6061-T6 RD Tube .375 x		Purchased	No	- 2	<del></del>	100	f	264.7320	0.345	36.31579			
0001-10 KD Tube .373 X	.038W			Longtion		Las Ota	1.0	oc Code	C				
				<b>Location</b>		Loc Qty	1.0	e Coue					
				MAT014		264.732							
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				119	087	0.11							
				123	303 /	8			_	1	_ (	١ ،	ONS
				123	449	247.2			_32	<u>.                                    </u>	12.8	s - (	04
				124	069	8.266							8-83

Page 1

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-C	O	NFORM	MANCE / UP	DATE	QA Closed:	Date	:
	. 1					DISPOSITION				AGAINST DE	<del></del>		
Work Ord	er: -		<del></del>				ıÌ		ا مطريع لدنيات	Crosstube	}	Water Jet	Engineering
Part I	No.					Rework Scrap		ľ	Skid-tube Machining	Small Fab	4	d. Eng. Coor.	Quality
NCR I	No.	· · · · · ·		u de la companya de l		Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Stoi	re/Packaging Supplier	Other
Root					Descri	ption of work order update	Π	Initial	. Ac	tion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling			İ	}									
Operator									:	-			
Material												<b>:</b>	
Setup			I				ļ				ļ		
Other									l				
Process	П						1	·				,	
Supplier					i e								
Training			ĺ				İ						
Unapproved	П		}		ļ								
						F	AUI	T CATE	GORY				····
Landi	ng G	ear				General		_			-	<u></u>	<del></del>
		Bending				Bend		Grain			Ovalized	L	Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on incomplete		Part Incorred	ct	Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Г	Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	at			Countersink		Mislabe	led		Positioned V	Vrong	_
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	i		Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Drill Holes

Drawing

Finish Folio

DART AEROSPACE LTD	Work Order:	101656
Description: Spacer	Part Number:	D3903-1
Inspection Dwg: D3903 Rev: B		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

X	First Article		Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.375	+0.006/-0.001	. 375			20.02	:
Ø0.259	+0.006/-0.001	. 257			ч	
4.080	+0.030/-0.000	4.095			11	
0.030 x 45°	+/-0.010 x 0.5°	.032			v	:
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	DAS						
Measured by:	04	Audited by:	b.0	DAG	Prototype Approval:	N/A	
Date:	13.6.1	Date:	13/06/0	8.89	Date:	N/A	

Rev	Date	Change	Revise	₽¢	l by	Approved
Α	09.10.01	New Issue	KJ 9	Y		W.

